AMENDMENTS TO THE CLAIMS

Cancel Claims 2 and 19 without prejudice. Please accept amended Claims 1 and 16 as follows:

1. (Currently Amended) A method for densification of a thermal spray coating comprising:

depositing a thermal spray coating on a substrate; and

mixing all the thermal spray coating and all the substrate by friction stir welding, forming a monolithic composite material consisting of the thermal spray coating and the substrate.

2. (Cancelled)

3. (Original) The method of claim 1, wherein the thermal spray coating is deposited by as a plasma spray.

4. (Original) The method of claim 1, wherein the thermal spray coating is deposited by oxy-fuel combustion acceleration of a powder feedstock.

5. (Original) The method of claim 1, wherein the thermal spray coating is deposited by two-wire electric arc spray.

6. (Original) The method of claim 1, wherein the substrate is a ferrous alloy.

7. (Original) The method of claim 1, wherein the substrate is a non-ferrous alloy.

8. (Original) The method of claim 1, wherein a thermal spray coating is a ceramic, a carbide, a metal, a composite, or a plastics.

9. (Original) The method of claim 1, further comprising determining a time between depositing the thermal spray coating and the friction stir welding according to a distance between a spray gun of a thermal spray system and a tool of a friction stir welding system and a speed of the substrate relative to the spray gun and tool.

10-15. (Cancelled)

16. (Currently Amended) A method for densification of a thermal spray coating comprising:

depositing a first thermal spray coating on a substrate;

forming a monolithic composite material by mixing all the thermal spray coating and ~~a portion of~~ all the substrate by friction stir welding; and

depositing a second thermal spray coating on the composite material, wherein the second thermal spray coating is not densified.

17. (Previously Presented) The method of claim 16, wherein the mixing causes metal flow of the first thermal spray coating to a depth controlled by a nib of a weld tool into the substrate.

18. (Previously Presented) The method of claim 1, further comprising depositing another thermal spray coating on the composite material, wherein the second thermal spray coating is not densified.

19. (Cancelled)